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NEWS 3 APR 03 CAS coverage of exemplified prophetic substances enhanced
NEWS 4 APR 07 STN is raising the limits on saved answers
NEWS 5 APR 24 CA/Caplus now has more comprehensive patent assignee information
NEWS 6 APR 26 USPATFULL and USPAT2 enhanced with patent assignment/reassignment information
NEWS 7 APR 28 CAS patent authority coverage expanded
NEWS 8 APR 28 ENCOMPLIT/ENCOMPLIT2 search fields enhanced
NEWS 9 APR 28 Limits doubled for structure searching in CAS REGISTRY
NEWS 10 MAY 08 STN Express, Version 8.4, now available
NEWS 11 MAY 11 STN on the Web enhanced
NEWS 12 MAY 11 BEILSTEIN substance information now available on STN Easy
NEWS 13 MAY 14 DGENE, PCTGEN and USGENE enhanced with increased limits for exact sequence match searches and introduction of free HIT display format
NEWS 14 MAY 15 INPADOCDB and INPAFAMDB enhanced with Chinese legal status data
NEWS 15 MAY 28 CAS databases on STN enhanced with NANO super role in records back to 1992
NEWS 16 JUN 01 CAS REGISTRY Source of Registration (SR) searching enhanced on STN
NEWS 17 JUN 26 NUTRACEUT and PHARMAML no longer updated
NEWS 18 JUN 29 IMSCOPROFILE now reloaded monthly
NEWS 19 JUN 29 EFFULL adds Simultaneous Left and Right Truncation (SLART) to AB, MCLM, and TI fields
NEWS 20 JUL 09 PATDPAFULL adds Simultaneous Left and Right Truncation (SLART) to AB, CLM, MCLM, and TI fields
NEWS 21 JUL 14 USGENE enhances coverage of patent sequence location (PSL) data
NEWS 22 JUL 27 CA/Caplus enhanced with new citing references
NEWS 23 JUL 16 GBFULL adds patent backfile data to 1855
NEWS 24 JUL 21 USGENE adds bibliographic and sequence information
NEWS 25 JUL 28 EFFULL adds first-page images and applicant-cited references
NEWS 26 JUL 28 INPADOCDB and INPAFAMDB add Russian legal status data
NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,
AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.
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***** STN Columbus *****

FILE 'HOME' ENTERED AT 14:59:26 ON 05 AUG 2009

=> file reg
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.22	0.22

FILE 'REGISTRY' ENTERED AT 14:59:43 ON 05 AUG 2009
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STRUCTURE FILE UPDATES: 4 AUG 2009 HIGHEST RN 1172694-04-0
DICTIONARY FILE UPDATES: 4 AUG 2009 HIGHEST RN 1172694-04-0

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TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

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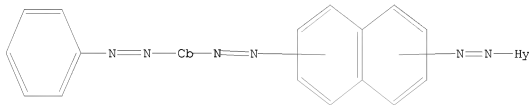
REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

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Uploading C:\Program Files\Stnexp\Queries\10579783-broad-cl1.str

L1 STRUCTURE UPLOADED

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L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SEARCH INITIATED 15:00:18 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 1384 TO ITERATE

100.0% PROCESSED 1384 ITERATIONS 5 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 25449 TO 29911
PROJECTED ANSWERS: 5 TO 234

L2 5 SEA SSS SAM L1

=> s l1 full

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FULL SCREEN SEARCH COMPLETED - 28393 TO ITERATE

100.0% PROCESSED 28393 ITERATIONS

92 ANSWERS

SEARCH TIME: 00.00.02

L3 92 SEA SSS FUL L1

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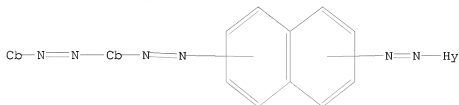
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FULL SUBSET SCREEN SEARCH COMPLETED - 92 TO ITERATE

100.0% PROCESSED 92 ITERATIONS

92 ANSWERS

SEARCH TIME: 00.00.01

L5 92 SEA SUB=L3 SSS FUL L4

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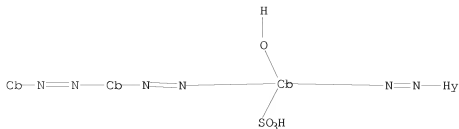
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L7 HAS NO ANSWERS

L7 STR



Structure attributes must be viewed using STN Express query preparation.

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100.0% PROCESSED      92 ITERATIONS      91 ANSWERS
SEARCH TIME: 00.00.01

L8      91 SEA SUB=L3 SSS FUL L7
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                        ENTRY      SESSION
FULL ESTIMATED COST      282.04      282.26
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FILE 'CAPLUS' ENTERED AT 15:10:26 ON 05 AUG 2009
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FILE COVERS 1907 - 5 Aug 2009 VOL 151 ISS 6
FILE LAST UPDATED: 4 Aug 2009 (20090804/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

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L9      7 L8

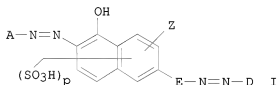
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YOU HAVE REQUESTED DATA FROM 7 ANSWERS - CONTINUE? Y/(N):y
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L9 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:173868 CAPLUS

DOCUMENT NUMBER: 146:230985
 TITLE: Process for printing an image on a substrate, composition and azo dye compound for use in the composition
 INVENTOR(S): Monahan, Lillian; Double, Philip John; Bradbury, Roy
 PATENT ASSIGNEE(S): Fujifilm Imaging Colorants Limited, UK
 SOURCE: PCT Int. Appl., 50 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007017631	A2	20070215	WO 2006-GB2862	20060731
WO 2007017631	A3	20070614		
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PRIORITY APPLN. INFO.:				

OTHER SOURCE(S): MARPAT 146:230985
 GI



AB A process for printing an image on a substrate with high d. and good lightfastness, comprising applying to the substrate an ink composition which comprises a liquid medium and a compound of formula I; wherein: A and D each independently represent optionally substituted aryl or optionally substituted heteroaryl; E represents optionally substituted pyrazolyl; Z represents H, halogen, nitro, cyano, hydroxy, amino, carboxy, optionally substituted alkyl, optionally substituted alkoxy or optionally substituted aryloxy; and p is an integer from 0 to 5; provided that E does not have an optionally substituted carbonamide group of formula - CONR1R2 directly attached to it, wherein R1 and R2 each independently represent H, optionally substituted alkyl, optionally substituted cycloalkyl, or optionally substituted aryl. The printing is preferably ink jet printing. Also provided are compds. of formula I and ink compns. containing the same.

IT 924311-51-3 924311-52-4 924311-53-5

924311-54-6 924311-55-7 924311-56-8

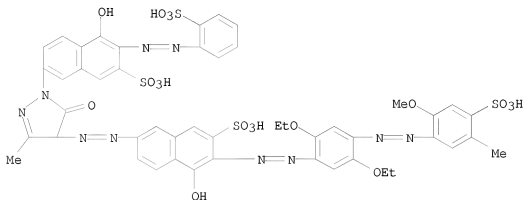
924311-57-9 924311-58-0

RL: TEM (Technical or engineered material use); USES (Uses)

(dye; manufacture of diazo naphthalene compds. and compns. for use in ink-jet printing)

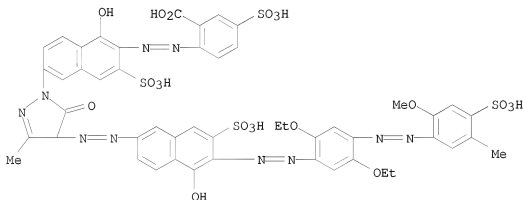
RN 924311-51-3 CAPLUS

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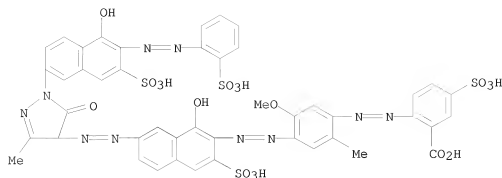
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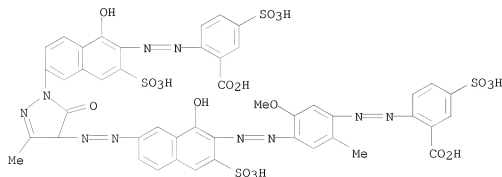


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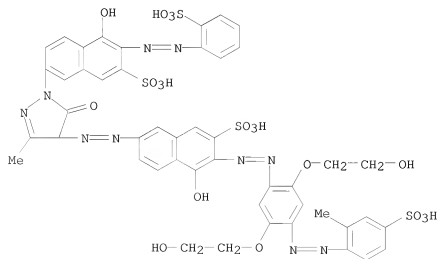
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RN 924311-54-6 CAPLUS
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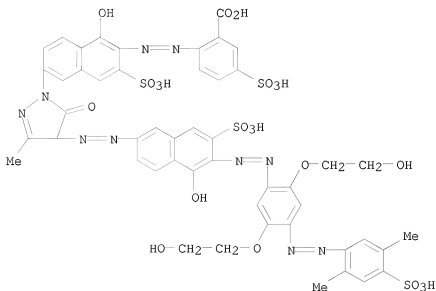


RN 924311-55-7 CAPLUS
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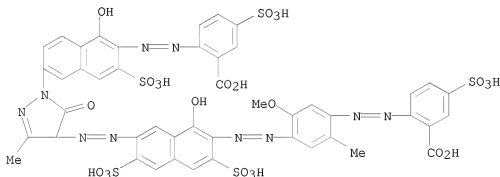
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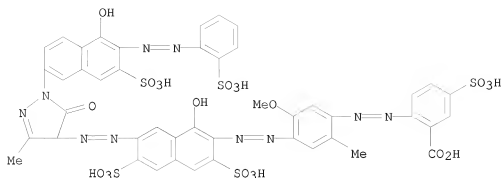
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RN 924311-58-0 CAPLUS

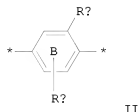
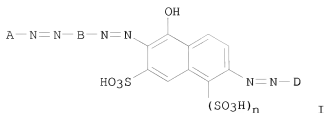
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L9 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2009 ACS on SIN
 ACCESSION NUMBER: 2005:490398 CAPLUS
 DOCUMENT NUMBER: 143:28079
 TITLE: Trisazo-dyestuffs for use as dyes and ink-jet inks
 INVENTOR(S): Mistry, Prahalad Manibhai; Bradbury, Roy
 PATENT ASSIGNEE(S): Avecia Inkjet Limited, UK
 SOURCE: PCT Int. Appl., 59 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005052065	A1	20050609	WO 2004-GB4868	20041118
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EP 1697467	A1	20060906	EP 2004-798583	20041118
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JP 2007517082	T	20070628	JP 2006-540590	20041118
US 20070062409	A1	20070322	US 2006-579783	20060518
PRIORITY APPLN. INFO.:			GB 2003-26980	A 20031120
			GB 2003-26997	A 20031120
			WO 2004-GB4868	W 20041118

OTHER SOURCE(S): MARPAT 143:28079
 GI



AB The invention relates to a compound of formula (I) or salt thereof: wherein A is optionally substituted Ph or naphthyl; B is optionally substituted phenylene or naphthylene; n is 0 or 1; and D is a pyrazolyl group, with the proviso that when A is an optionally substituted Ph group and B is a phenylene group of formula: (II); wherein Ra is OH or a Cl-4-alkoxy group; and Rb is H or a Cl-4-alkyl group, hydroxy group, Cl-4-alkoxy group, Cl-3-dialkylamino group or a group of the formula NHCORc (wherein Rc is Cl-3-alkyl or an amino group); and * shows the point of attachment to the azo linkages on B in formula (I); A is free from nitro groups. Also, claimed are compds., compns. and ink-jet cartridges for use in an ink-jet printer and substrate printed with an ink-jet printer.

IT

852909-45-6P	852909-46-7P	852909-47-8P
852909-48-9P	852909-49-0P	852909-50-3P
852909-51-4P	852909-52-5P	852909-53-6P
852909-54-7P	852909-55-8P	852909-56-9P
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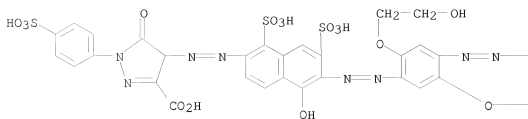
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of trisazo-dyestuffs for use as dyes and ink-jet inks)

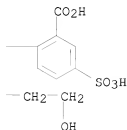
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PAGE 1-A



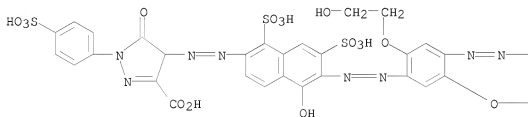
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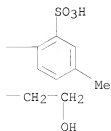
RN 852909-46-7 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methyl-2-sulphophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

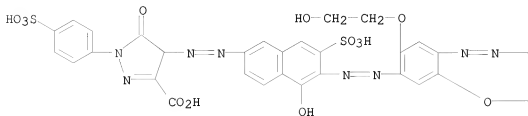


RN 852909-47-8 CAPLUS

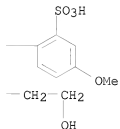
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methyl-2-sulphophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

(4-methoxy-2-sulphophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

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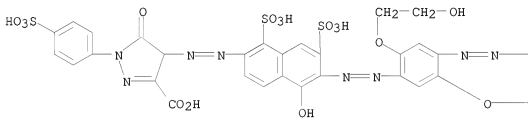
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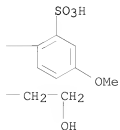
RN 852909-48-9 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfo-phenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfo-phenyl)- (CA INDEX NAME)

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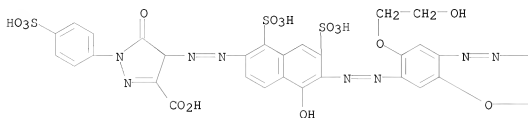
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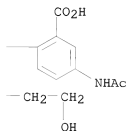
RN 852909-49-0 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-(acetylamino)-2-carboxyphenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfonyl)-(CA INDEX NAME)

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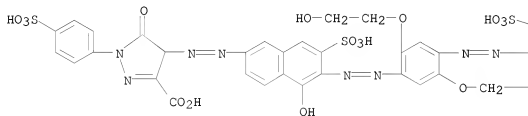
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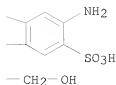
RN 852909-50-3 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-amino-2,5-disulfo-2-naphthalenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfonyl)-(CA INDEX NAME)

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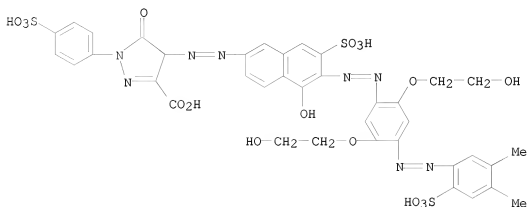


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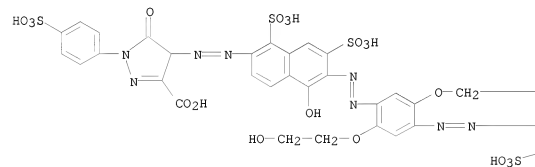
RN 852909-51-4 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4,5-dimethyl-2-sulfo-2-naphthalenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfo-phenyl)- (CA INDEX NAME)



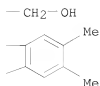
RN 852909-52-5 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4,5-dimethyl-2-sulfo-2-naphthalenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfo-phenyl)- (CA INDEX NAME)



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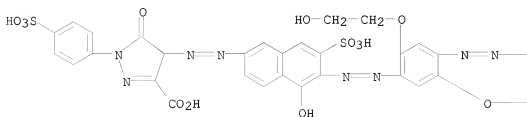
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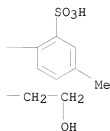
RN 852909-53-6 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-(2-(4-methyl-2-sulphophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

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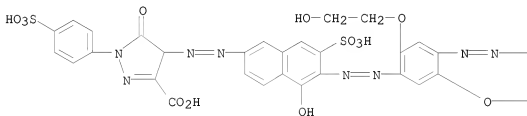
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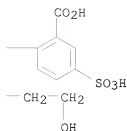


RN 852909-54-7 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-sulphophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

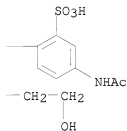
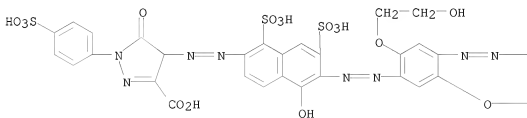
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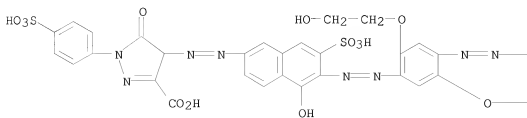
RN 852909-55-8 CAPLUS

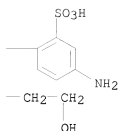
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-(acetylamino)-2-sulfophenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)



RN 852909-56-9 CAPLUS

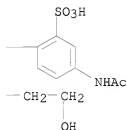
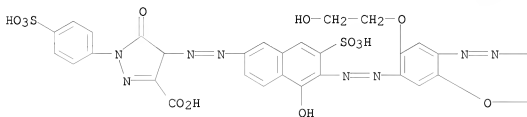
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-amino-2-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)





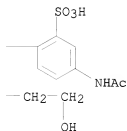
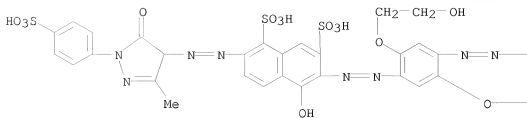
RN 852909-57-0 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-(acetylamino)-2-sulphophenyl]diazanyl)-2,5-bis(2-hydroxyethoxy)phenyl]diazanyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazanyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)



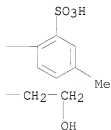
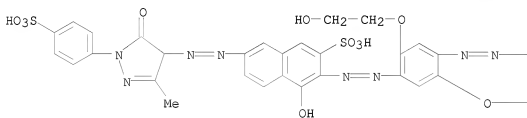
RN 852909-58-1 CAPLUS

CN 1,7-Naphthalenedisulfonic acid, 6-[2-[4-[2-[4-(acetylamino)-2-sulphophenyl]diazanyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazanyl]-2-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazanyl]-5-hydroxy- (CA INDEX NAME)



RN 852909-59-2 CAPLUS

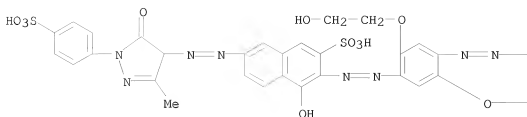
CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methyl-2-sulphophenyl)diazenyl]phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)



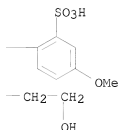
RN 852909-60-5 CAPLUS

CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulphophenyl)diazenyl]phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)

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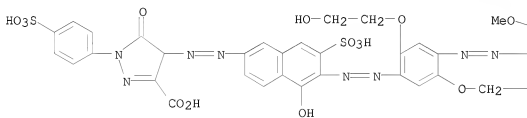
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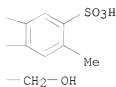
RN 852909-61-6 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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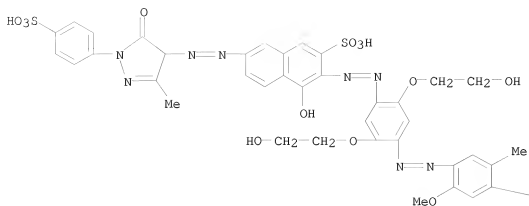
PAGE 1-B



RN 852909-62-7 CAPLUS

CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)

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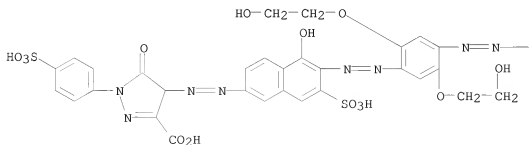
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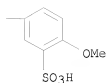
SO₃H

RN 852909-63-8 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-3-sulphophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

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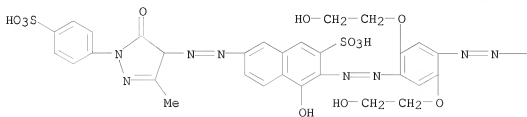




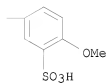
RN 852909-64-9 CAPLUS

CN 2-Naphthalenesulfonic acid, 3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-3-sulphophenyl)diazenyl]phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)

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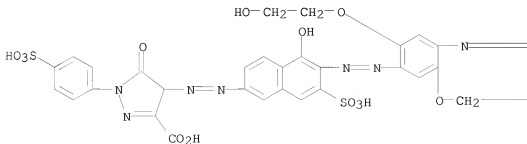
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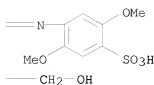


RN 852909-65-0 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2,5-dimethoxy-4-sulphophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

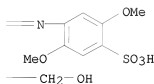
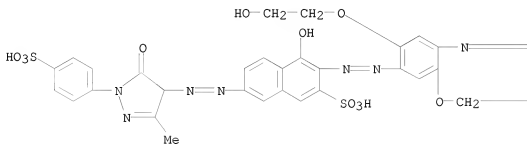
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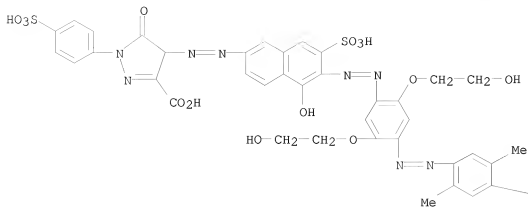
RN 852909-66-1 CAPLUS

CN 2-Naphthalenesulfonic acid, 7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-3-[2-[4-[2-(2,5-dimethoxy-4-sulphophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-4-hydroxy- (CA INDEX NAME)



RN 852909-67-2 CAPLUS

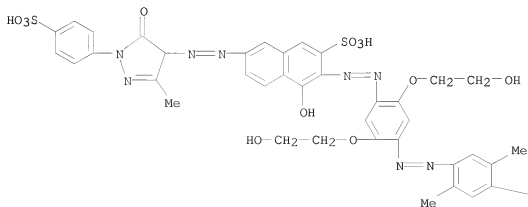
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2,5-dimethyl-4-sulphophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)



—SO₃H

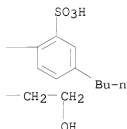
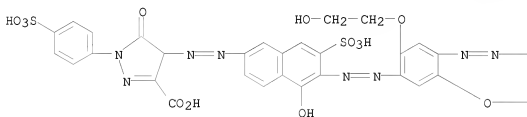
RN 852909-68-3 CAPLUS

CN 2-Naphthalenesulfonic acid, 7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-3-[2-[4-[2-(2,5-dimethyl-4-sulphophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-4-hydroxy-
(CA INDEX NAME)



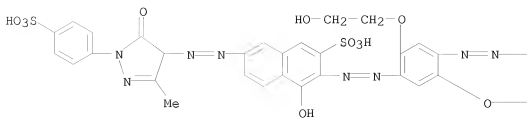


RN 852909-69-4 CAPLUS
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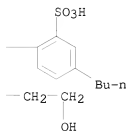


RN 852909-70-7 CAPLUS
 CN 2-Naphthalenesulfonic acid, 3-[2-[4-[2-(4-butyl-2-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy- (CA INDEX NAME)

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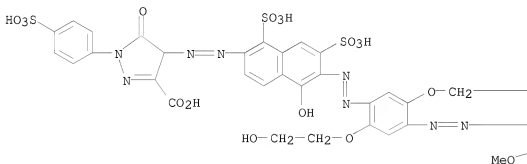
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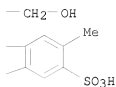


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CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

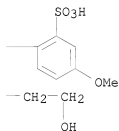
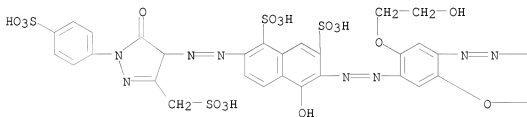
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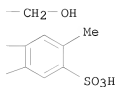
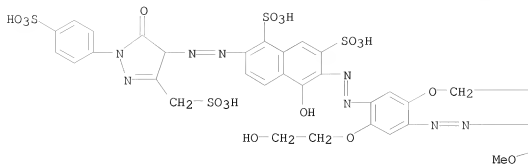
RN 852909-72-9 CAPLUS

CN 1,7-Naphthalenedisulfonic acid, 6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazenyl]-2-[2-[4,5-dihydro-5-oxo-3-(sulfomethyl)-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-5-hydroxy- (CA INDEX NAME)



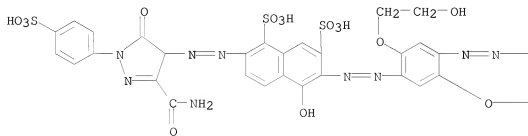
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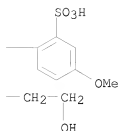
CN 1,7-Naphthalenedisulfonic acid, 6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-2-[2-[4,5-dihydro-5-oxo-3-(sulfomethyl)-1-(4-sulfophenyl)-1H-pyrazol-4-yl]diazenyl]-5-hydroxy- (CA INDEX NAME)



RN 852909-74-1 CAPLUS

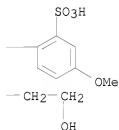
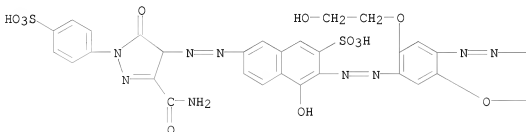
CN 1,7-Naphthalenedisulfonic acid, 2-[2-[3-(aminocarbonyl)-4,5-dihydro-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazanyl]-6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulphophenyl)diazenyl]phenyl]diazanyl]-5-hydroxy- (CA INDEX NAME)





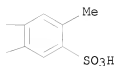
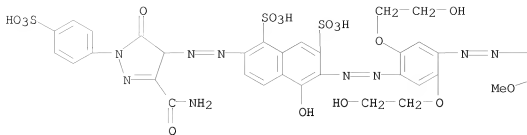
RN 852909-75-2 CAPLUS

CN 2-Naphthalenesulfonic acid, 7-[2-[3-(aminocarbonyl)-4,5-dihydro-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazeryl]-3-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulphophenyl)diazeryl]phenyl]diazeryl]-4-hydroxy- (CA INDEX NAME)



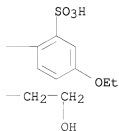
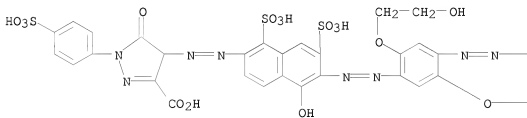
RN 852909-76-3 CAPLUS

CN 1,7-Naphthalenedisulfonic acid, 2-[2-[3-(aminocarbonyl)-4,5-dihydro-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazeryl]-6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulphophenyl)diazeryl]phenyl]diazeryl]-5-hydroxy- (CA INDEX NAME)



RN 852909-77-4 CAPLUS

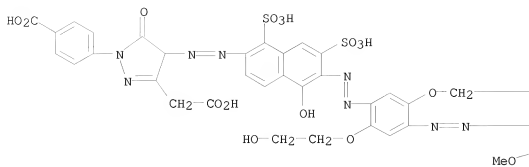
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-ethoxy-2-sulfophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)



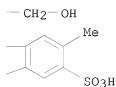
RN 852909-78-5 CAPLUS

CN 1H-Pyrazole-3-acetic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo-(CA INDEX NAME)

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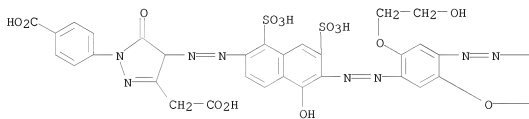
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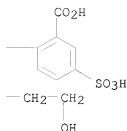


RN 852909-79-6 CAPLUS

CN 1H-Pyrazole-3-acetic acid, 1-(4-carboxyphenyl)-4-[2-[6-[2-[4-[2-(2-carboxy-4-sulphophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo- (CA INDEX NAME)

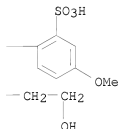
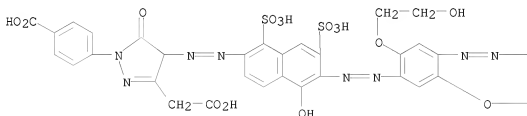
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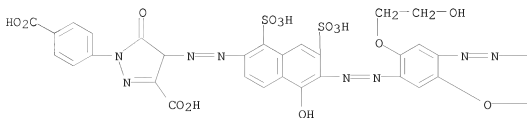
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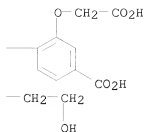
CN 1H-Pyrazole-3-acetic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo- (CA INDEX NAME)



RN 852909-81-0 CAPLUS

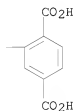
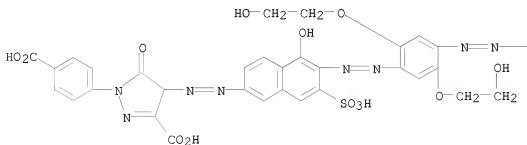
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-carboxy-2-(carboxymethoxy)phenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo- (CA INDEX NAME)





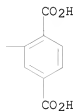
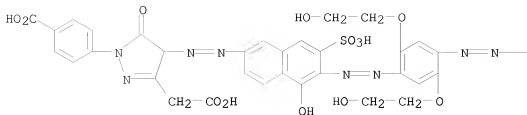
RN 852909-82-1 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 2-[2-[4-[2-[6-[2-[3-carboxy-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]- (CA INDEX NAME)



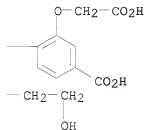
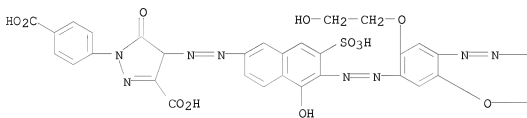
RN 852909-83-2 CAPLUS

CN 1,4-Benzenedicarboxylic acid, 2-[2-[4-[2-[6-[2-[3-(carboxymethyl)-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]- (CA INDEX NAME)



RN 852909-84-3 CAPLUS

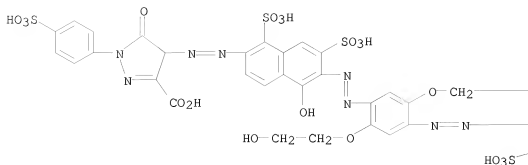
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-(2-carboxy-2-(carboxymethoxy)phenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl)diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-1-(4-carboxyphenyl)-4,5-dihydro-5-oxo- (CA INDEX NAME)



RN 852909-86-5 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-(2-sulfo-2-naphthalenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfo-2-naphthalenyl)- (CA INDEX NAME)

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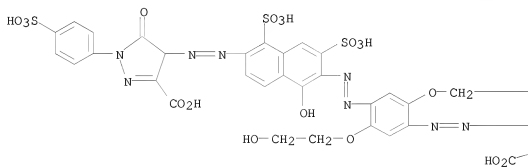
PAGE 1-B

—CH₂—OH



RN 852909-87-6 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-(2-carboxyphenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazanyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazanyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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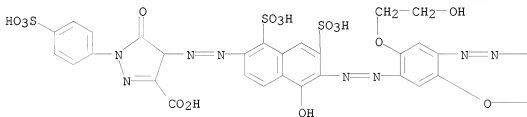




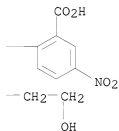
RN 852909-88-7 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-nitrophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)-
(CA INDEX NAME)

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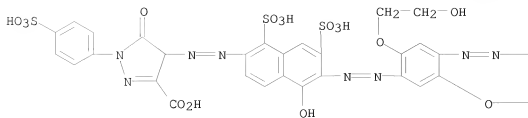
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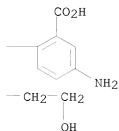
RN 852909-89-8 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-amino-2-carboxyphenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)-
(CA INDEX NAME)

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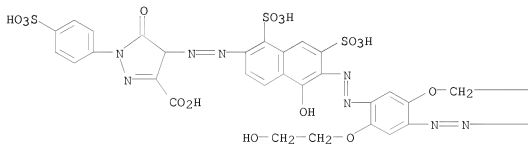
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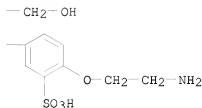


RN 852909-90-1 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-(2-aminoethoxy)-3-sulfophenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)-(CA INDEX NAME)

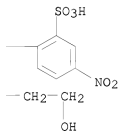
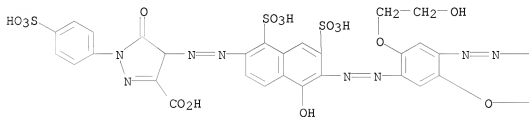
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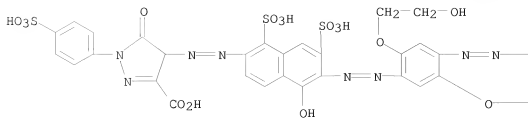
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-nitro-2-sulfophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)



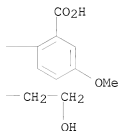
RN 852909-92-3 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-methoxyphenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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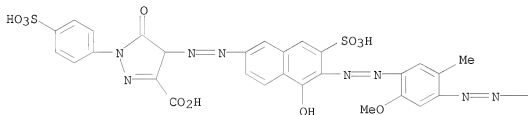
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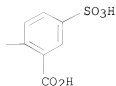
RN 852909-93-4 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-sulphophenyl)diazenyl]-2-methoxy-5-methylphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

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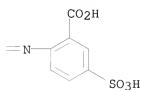
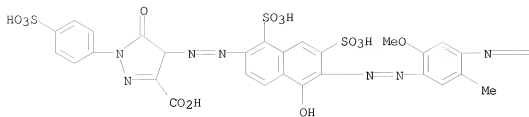


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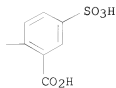
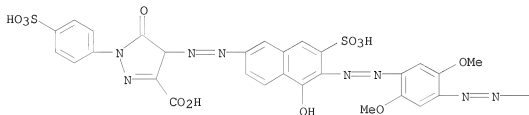
RN 852909-94-5 CAPLUS

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RN 852909-95-6 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(2-carboxy-4-sulphophenyl)diazenyl]-2,5-dimethoxyphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

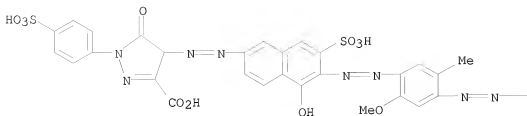


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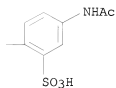
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-(4-acetylamino)-2-sulphophenyl]diazenyl]-2-methoxy-5-methylphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

NAME)

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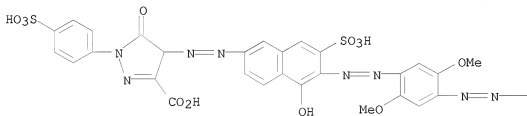
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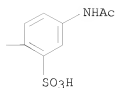
RN 852909-97-8 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-(4-sulfophenyl)diazenyl]-2,5-dimethoxyphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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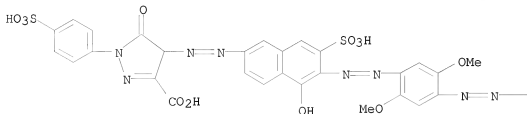
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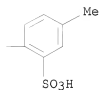
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CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-dimethoxy-4-[2-(4-methyl-2-sulphophenyl)diazenyl]phenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

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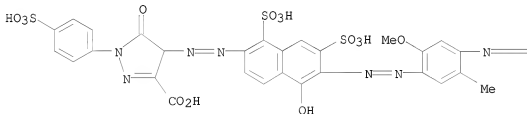
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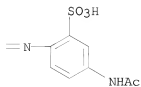
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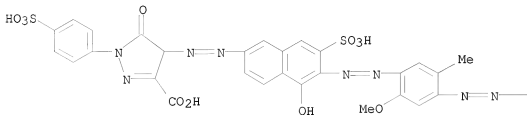
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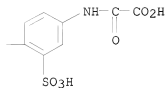
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CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-[2-[4-
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dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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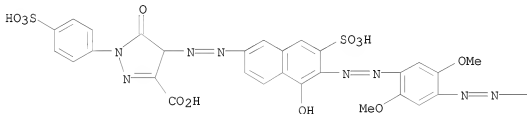
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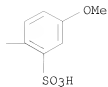
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CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[2,5-dimethoxy-4-[2-(4-methoxy-2-
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NAME)

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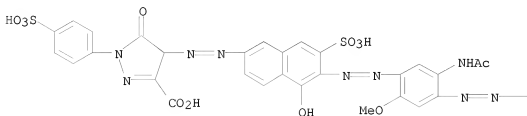
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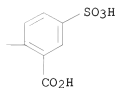
RN 852910-02-2 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[5-(acetylamino)-4-[2-(2-carboxy-4-sulfophenyl)diazenyl]-2-methoxyphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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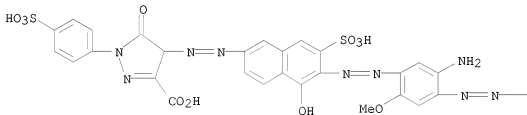
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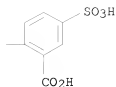


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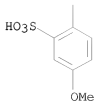
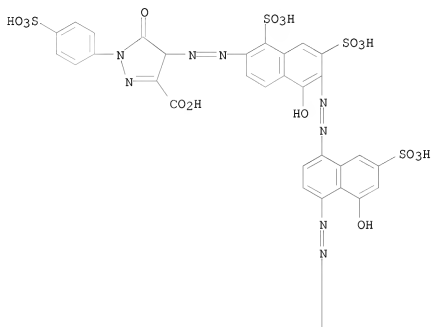
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[5-amino-4-[2-(2-carboxy-4-sulfophenyl)diazenyl]-2-methoxyphenyl]diazenyl]-5-hydroxy-7-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

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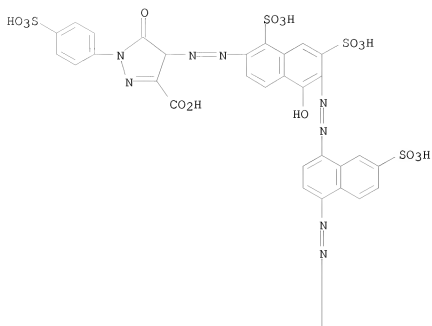


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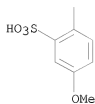


RN 852910-05-5 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[5-hydroxy-6-[2-[4-[2-(4-methoxy-2-sulfophenyl)diazenyl]-7-sulfo-1-naphthalenyl]diazenyl]-1,7-disulfo-2-naphthalenyl]diazenyl]-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A

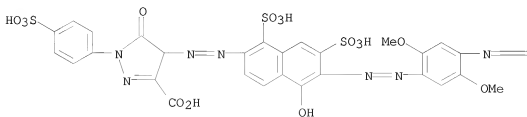


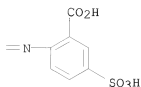
PAGE 2-A



RN 852910-06-6 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[6-[2-[4-(2-carboxy-4-sulfophenyl)diazenyl]-2,5-dimethoxyphenyl]diazenyl]-5-hydroxy-1,7-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A



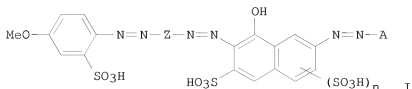


OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(5 CITINGS)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:913245 CAPLUS
DOCUMENT NUMBER: 139:382775
TITLE: Trisazo dyes for ink jet printing
INVENTOR(S): Mistry, Prahalad Manibhai; Bradbury, Roy
PATENT ASSIGNEE(S): Avecia Limited, UK
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003095563	A1	20031120	WO 2003-GB2007	20030508
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2003230002	A1	20031111	AU 2003-230002	20030508
EP 1506260	A1	20050216	EP 2003-722842	20030508
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
JP 2005525449	T	20050825	JP 2004-503562	20030508
US 20050200671	A1	20050915	US 2004-513472	20041109
US 7041161	B2	20060509		
PRIORITY APPLN. INFO.:			GB 2002-10824	A 20020511
			WO 2003-GB2007	W 20030508

OTHER SOURCE(S): MARPAT 139:382775
GI



AB Disclosed in a composition comprising a liquid medium and a black trisazo dye
(I;

A = pyrazolonyl group; Z = optionally substituted phenylene or naphthylene; n is 0 or 1) or a salt thereof wherein the medium comprises an organic solvent. Inks comprising such compns. have good storage stability and low tendency to block jet-printing nozzles, while prints and images from these compns. have good optical d. and resistance to fading. In an example, 2-sulfo-4-methoxyaniline-2,5-dimethoxyaniline was prepared and diazotized and coupled with gamma acid to give a disazo dye. This intermediate was diazotized and coupled with 1-(4-sulfophenyl)-5-pyrazolone-3-carboxylic acid to provide a trisazo dye.

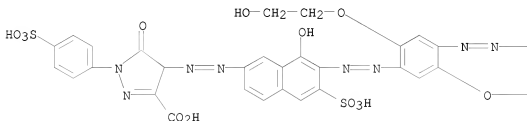
IT 624742-55-8

RL: TEM (Technical or engineered material use); USES (Uses)
(dye; black trisazo dyes for jet printing inks)

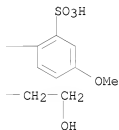
RN 624742-55-8 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazeryl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazeryl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

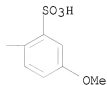
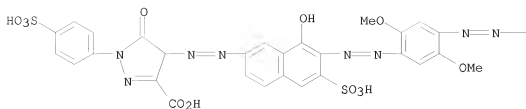


IT 624742-54-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; production of black trisazo dyes for jet printing inks)

RN 624742-54-7 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[2,5-dimethoxy-4-[2-(4-methoxy-2-sulfophenyl)diazenyl]phenyl]diazeryl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazeryl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD
(6 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:913244 CAPLUS

DOCUMENT NUMBER: 139:396968

TITLE: Trisazo dyes for ink jet printing

INVENTOR(S): Mistry, Prahalad Manibhai; Bradbury, Roy

PATENT ASSIGNEE(S): Avecia Limited, UK

SOURCE: PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

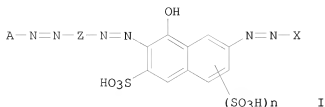
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003095562	A1	20031120	WO 2003-GB1981	20030508
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2003227918	A1	20031111	AU 2003-227918	20030508
EP 1506261	A1	20050216	EP 2003-725383	20030508
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
JP 2005529990	T	20051006	JP 2004-503561	20030508
US 20050217535	A1	20051006	US 2004-513750	20041109
US 7052538	B2	20060530		
PRIORITY APPLN. INFO.:			GB 2002-10824	A 20020511
			WO 2003-GB1981	W 20030508
OTHER SOURCE(S):	MARPAT 139:396968			

GI



AB Disclosed is a composition comprising a liquid medium and black trisazo dye I
(A

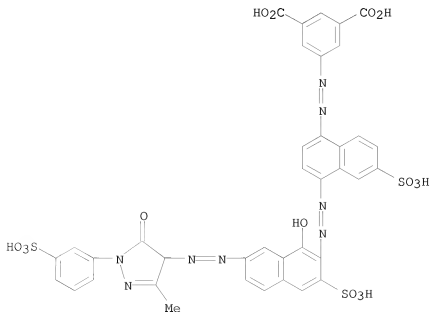
= optionally substituted Ph or naphthyl provided A is not 2-sulfo-4-methoxyphenyl; X = pyrazolonyl group; Z = optionally substituted phenylene or naphthylene; n = 0, 1) wherein the liquid medium comprises an organic solvent. Inks comprising said compns. have good storage stability and low tendency to block jet-printing nozzles, while prints and images from these compns. have good optical d. and resistance to fading. In an example, 5-aminoisophthalic acid-1-naphthylamine was prepared and diazotized and coupled with gamma acid. The resulting disazo dye was then diazotized and coupled with 1-phenyl-5-pyrazolone-3-carboxylic acid to give a trisazo dye (λ_{max} 578 nm).

IT 625471-46-7P 625471-48-9P 625471-49-0P
625471-50-3P 625471-51-4P 625471-52-5P
625471-53-6P 625471-54-7P 625471-55-8P
625471-56-9P 625471-57-0P 625471-58-1P
625471-59-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(black dye; production of trisazo dyes for ink jet printing)

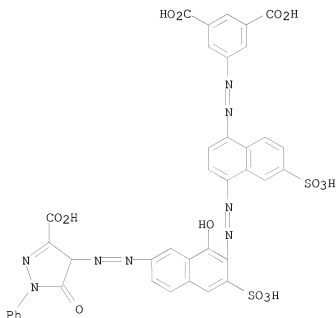
RN 625471-46-7 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(3-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



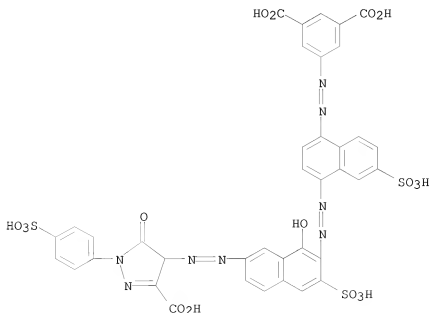
RN 625471-48-9 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-(3-carboxy-4,5-dihydro-5-oxo-1-phenyl-1H-pyrazol-4-yl)diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



RN 625471-49-0 CAPLUS

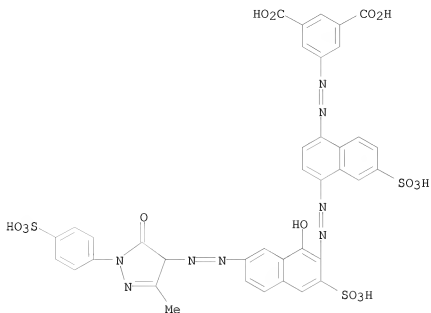
CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-[3-carboxy-4,5-dihydro-5-oxo-1-(4-sulfo-phenyl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



RN 625471-50-3 CAPLUS

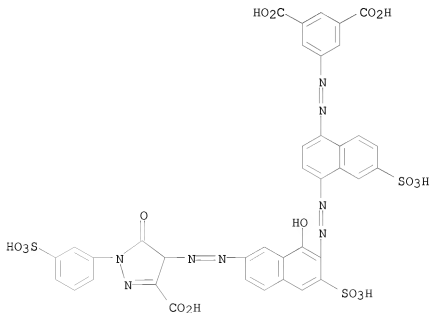
CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfo-phenyl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-

naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



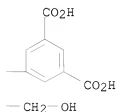
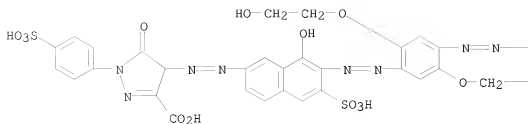
RN 625471-51-4 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-[3-carboxy-4,5-dihydro-5-oxo-1-(3-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-6-sulfo-1-naphthalenyl]diazenyl]- (CA INDEX NAME)



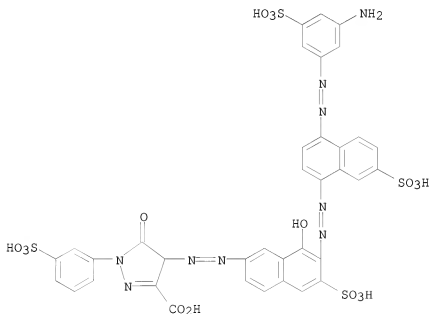
RN 625471-52-5 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-[2-[4-[2-[7-[2-[3-carboxy-4,5-dihydro-5-oxo-1-(4-sulphophenyl)-1H-pyrazol-4-yl]diazenyl]-1-hydroxy-3-sulfo-2-naphthalenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]- (CA INDEX NAME)



RN 625471-53-6 CAPLUS

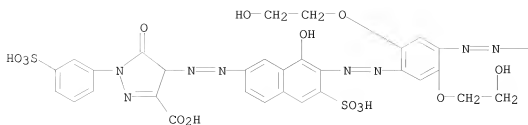
CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[4-[2-(3-amino-5-sulphophenyl)diazenyl]-7-sulfo-1-naphthalenyl]diazenyl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(3-sulphophenyl)- (CA INDEX NAME)



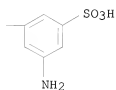
RN 625471-54-7 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[4-[2-(3-amino-5-sulphophenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(3-sulphophenyl)- (CA INDEX NAME)

PAGE 1-A

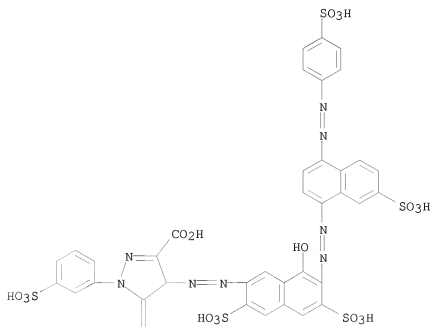


PAGE 1-B



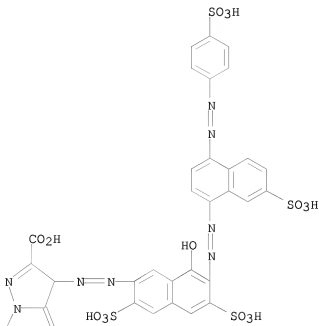
RN 625471-55-8 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[8-hydroxy-3,6-disulfo-7-[2-[7-sulfo-4-[2-(4-sulfophenyl)diazenyl]-1-naphthalenyl]diazenyl]-2-naphthalenyl]diazenyl]-5-oxo-1-(3-sulfophenyl)- (CA INDEX NAME)

PAGE 1-A

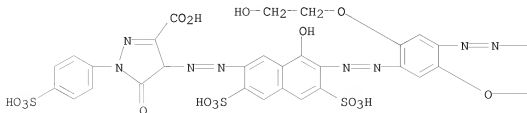


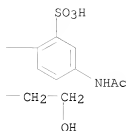


RN 625471-56-9 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[8-hydroxy-3,6-disulfo-7-[2-[7-sulfo-4-[2-(4-sulfophenyl)diazenyl]-1-naphthalenyl]diazenyl]-2-naphthalenyl]diazenyl]-5-oxo-1-phenyl- (CA INDEX NAME)



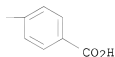
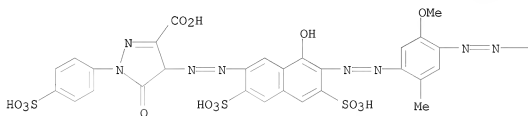
RN 625471-57-0 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[4-[2-[4-(acetylamino)-2-sulfophenyl]diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-8-hydroxy-3,6-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)





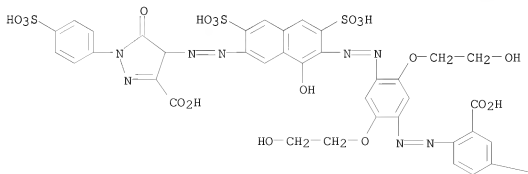
RN 625471-58-1 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[4-[2-(4-carboxyphenyl)diazenyl]-5-methoxy-2-methylphenyl]diazenyl]-8-hydroxy-3,6-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)



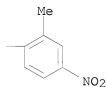
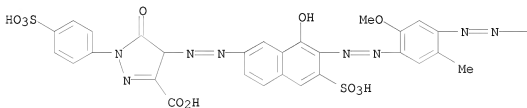
RN 625471-59-2 CAPLUS

CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[4-[2-(4-(acetamino)-2-carboxyphenyl)diazenyl]-2,5-bis(2-hydroxyethoxy)phenyl]diazenyl]-8-hydroxy-3,6-disulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulphophenyl)- (CA INDEX NAME)

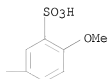
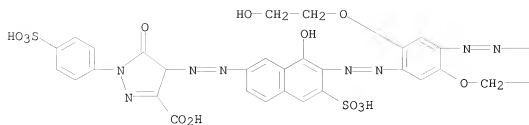


NHAc

IT 625471-60-5 625471-61-6 625471-62-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (black dye; trisazo dyes for ink jet printing)
 RN 625471-60-5 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[8-hydroxy-7-[2-[2-methoxy-5-methyl-4-[2-(2-methyl-4-nitrophenyl)diazenyl]phenyl]diazenyl]-6-sulfo-2-naphthalenyl]diazenyl]-5-oxo-1-(4-sulfo-phenyl)- (CA INDEX NAME)

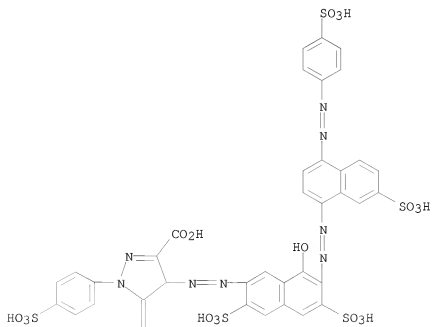


RN 625471-61-6 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4-[2-[7-[2-[2,5-bis(2-hydroxyethoxy)-4-[2-(4-methoxy-3-sulfo-phenyl)diazenyl]phenyl]diazenyl]-8-hydroxy-6-sulfo-2-naphthalenyl]diazenyl]-4,5-dihydro-5-oxo-1-(4-sulfo-phenyl)- (CA INDEX NAME)



—CH₂—OH

RN 625471-62-7 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 4,5-dihydro-4-[2-[8-hydroxy-3,6-disulfo-7-[2-[7-sulfo-4-[2-(4-sulfophenyl)diazenyl]-1-naphthalenyl]diazenyl]-2-naphthalenyl]diazenyl]-5-oxo-1-(4-sulfophenyl)- (CA INDEX NAME)



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OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:488144 CAPLUS

DOCUMENT NUMBER: 129:190457

ORIGINAL REFERENCE NO.: 129:38685a,38688a

TITLE: Lightfast anion black dyes for paper, pulp, leather,
cellulose fibers, inks, etc.

INVENTOR(S): Inoue, Kaname; Imanaka, Hiroshi

PATENT ASSIGNEE(S): Nippon Chemical Works Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10195320	A	19980728	JP 1997-3673	19970113
JP 4125801	B2	20080730		
PRIORITY APPLN. INFO.:			JP 1997-3673	19970113
OTHER SOURCE(S):	MARPAT	129:190457		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title dyes are I (or metal complexes thereof), wherein R1, R2 = C1-4 alkyl, alkoxy, OH, nitro, halogen, cyano, CF3, SO3H, SO2R5, SO2NR6R7, CO2H, CONR8R9; R3 = H, C1-4 alkyl, alkoxy, OH, C1-3 dialkylamino, NHCOR10; R4 = H, C1-3 alkyl; m = 0-3; n = 1, 2; K = coupling component II, III or IV when n = 1 and V, VI or VII when n = 2; R5 = C1-4 alkyl; R6-9 = H, C1-4 alkyl; R10 = amino, C1-3 alkyl; R11 = C1-3 alkyl, alkoxy; R12 = C1-3 alkyl, acetyl, carbonylamino; a, d, e, f, g = 1-2; X = direct bond, alkylenecarbonyl; b = 1-3; c = 0-1; R12, R14 = C1-3 alkyl, alkoxy, halogen; C15 = C1-3 alkyl, alkoxy, halogen; R15 = C1-3 alkyl, carbonyl, carbomethyl; R16, R17 = H, C1-3 alkyl; A = CO, C1-4 alkylene; R18 = C1-4 alkylamine, C1-4 alkanolamine, aromatic amine, OH. P-nitroaniline was diazotized, coupled with 2,5-dimethoxyaniline, the coupling product diazotized, further coupled with γ acid, the coupling product diazotized, and coupled with m-phenylenediamine-4-sulfonic acid to obtain a desired dye.

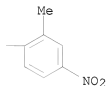
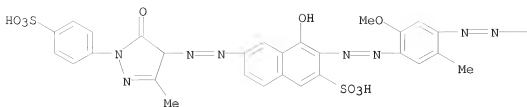
IT 211809-50-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(lightfast anion black dyes for paper, pulp, leather, cellulose fibers, and inks)

RN 211809-50-6 CAPLUS

CN 2-Naphthalenesulfonic acid, 6-[2-[4,5-dihydro-3-methyl-5-oxo-1-(4-sulfonylphenyl)-1H-pyrazol-4-yl]diazenyl]-4-hydroxy-3-[2-[2-methoxy-5-methyl-4-[2-(2-methyl-4-nitrophenyl)diazenyl]phenyl]diazenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

L9 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:38338 CAPLUS

DOCUMENT NUMBER: 112:38338

ORIGINAL REFERENCE NO.: 112:6621a,6624a

TITLE: Inks containing azo dyes with cyanopyrazolinone groups
for jet printing

INVENTOR(S): Sakaeda, Takeshi; Suga, Yuko; Shiota, Katsuhiro

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

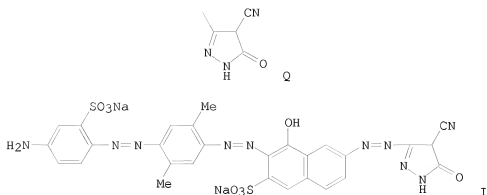
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 01135880	A	19890529	JP 1987-294035	19871124
PRIORITY APPLN. INFO.:			JP 1987-294035	19871124
GI				



AB The title inks, anticlogging with good storage stability, comprise ≥ 1 of dyes containing structural unit Q in the mol. Thus, a composition of compound I 4, diethylene glycol 30, and H₂O 66% was anticlogging and storage-stable and produced light- and water-resistant prints on a variety of papers.

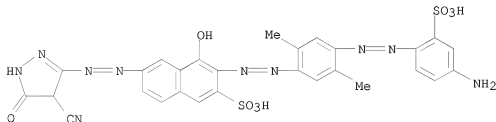
IT 124673-71-8

RL: USES (Uses)

(inks containing, black, for jet-printing)

RN 124673-71-8 CAPLUS

CN 2-Naphthalenesulfonic acid, 3-[2-[4-[2-(4-amino-2-sulfophenyl)diazenyl]-2,5-dimethylphenyl]diazenyl]-6-[2-(4-cyano-4,5-dihydro-5-oxo-1H-pyrazol-3-yl)diazenyl]-4-hydroxy-, sodium salt (1:2) (CA INDEX NAME)



● 2 Na

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L9 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1964:462105 CAPLUS

DOCUMENT NUMBER: 61:62105

ORIGINAL REFERENCE NO.: 61:10810c-h,10811a-b

TITLE: Metalized dis- and trisazo reactive dyes

INVENTOR(S): Andrew, Herbert F.; Baker, Ronald

PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.

SOURCE: 20 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

GB 951471	19640304	GB 1961-19080	19610526
US 3207746	19650921	US 1962-194173	19620511
PRIORITY APPLN. INFO.:		GB	19610526

GI For diagram(s), see printed CA Issue.

AB The title compds. contain 0.5, 1, or 2 metal atoms per mol. and are less substantive than some polyazo direct dyes thereby reducing the staining of adjacent undyed or different colored areas during washing of cellulosic textiles dyed with the compds. Cu or Co complexes were prepared from compds. of the general formula I, where A is H or NaO3S, and X is either (1) a triazinylamino group containing two Cl substituents or one Cl and one sulfonated anilino group, or (2) a 1-phenyl-5-pyrazolonylazo group bearing a triazinylamino group substituted as under 1. Thus, 2,5-(HO3S)2C6H3NH2 (II) was diazotized and coupled in alkaline medium with 1,2,5,7-Cl(H2N)(HO)ClOH4SO3H (III) and the product diazotized and coupled in alkaline medium with 2,5,1,7-H2N(HO)ClOH4(SO3H)2 (IV), yielding a disazo compound, which was copperized by boiling for .apprx.1 hr. in an aqueous solution containing 2% NaOH, 2% glycerol, and 1.5 moles CuSO4, the Cl group being replaced by an OH group under these conditions. A solution containing the product 10.2 and H2O 200 was added gradually to a suspension of cyanuric chloride (V) 2.22, H2O 27, and ice 50 parts at 0-5° and pH 6.5-7.0, the pH being maintained by addition of Na2CO3 solution 3-NaO3SC6H3NH2 (VI) 4.7 and NaHSO4 0.3 were added, the solution poured into Me2CO, precipitating I (A = NaO3S, X = dichlorotriazinylamino), which was filtered, mixed with VI 1.88 and NaHSO4 0.12 part and dried. It dyed cotton light- and wetfast green shades. Similarly other I were prepared (reactants, metal, and shade given): (II → III) → IV, V, 3-NaO3SC6H4NH2 (VII), Co, blue (the Cu complex of (II → III) → IV was prepared, demetalized by stirring 18 hrs. at 20-5° in concentrated HCl, and treated with neutral aqueous CoCl2 at 95° for 18 hrs.); [(II → III) → IV] → 1-(2-methyl-3-amino-5-sulfophenyl)-3-methyl-5-pyrazolone (VIII), V, 3,5-(HO3S)2C6H8NH2 (IX), Cu, yellowish green; [(II → III) → 2,5,7-H2N(HO)ClOH5SO3H (X)] → VIII, V, IX, Cu, green. Either 3,4-(HO3S)(H2N)C6H4NHAc or the 4,3-isomer was coupled with III and the products coupled with 3,6,2- or 6,8,2-(HO3S)2ClOH5OH, the AcNH group being deacetylated and the Cl group being replaced by OH during subsequent alkaline metalization. The Cu or Ni complexes of XI, where Y or Z is NaO3S, the other being H, were either (1) condensed with V, further condensed with VII, and treated with pyridine (XII) or mercaptobenzothiazole (XIII) or (2) coupled with a pyrazolone compound containing a 1-(3-aminophenyl) group, condensed with V, and further condensed with IX. Dyes prepared from the XI type intermediate were (reactants, metal, and shade given): [2,5-HO3S(AcNH)C6H3NH2 (XIV) → III] → 6,8,2-(HO3S)2ClOH5OH (XV), V, Ni, blue (prepared from demetalized Cu complex); (XIV → III) → XV, V, VII, treated with XII, Cu, green; [2,4-HO3S(AcNH)C6H3NH2 (XVI) → III] → 3,6,2-(HO3S)2ClOH5OH (XVII), V, VII, treated with XIII, Cu, bluish green; [(XIV → III) → XV] → VIII, V, Cu, yellowish green; [(XIV → III) → XV] → 1-(3-aminophenyl)-5-pyrazolone-3-carboxylic acid, V, IX, Cu, yellowish green. Other dis- and trisazo reactive dyes containing one or two chlorotriazinyl groups were prepared (reactants, metal, and shade given): [(2-HO3SC6H4NH2 (XVIII) → III) → IV] → VIII, V, 2,4-HO2C(HO3S)C6H3NH2, Cu, yellowish green; [(XVIII → III) → IV] → VIII, V, VII, Cu, green; [(2,5-HO(HO3S)C6H3NH2 → III) → IV] → 1-(2-methyl-3-(4,6-dichlorotriazin-2-ylamino)-5-sulfophenyl)-3-methyl-5-pyrazolone, Cu (2 atoms/mol.), green; (XIV → III) → 8,5,7,1-H2N(HO3S)2ClOH4OH, V, Cr (prepared from demetalized Cu complex), gray green; [(XIV → III) → IV, V] → 1-(3-sulfophenyl)-5-pyrazolone-3-carboxylic acid, Cu, green; (XIV → III) → IV, V, 3-HO3SC6H4NHMe, V, Cu, green (bluish green before the last condensation with V):

IT 859452-14-5, 1,7-Naphthalenedisulfonic acid,

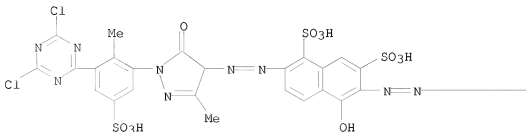
6-[[1-chloro-5-hydroxy-6-[(2-hydroxy-5-sulfophenyl)azo]-7-sulfo-2-naphthyl]azo]-2-[[1-[3-(4,6-dichloro-s-triazin-2-yl)-5-sulfo-o-tolyl]-3-methyl-5-oxo-2-pyrazolin-4-yl]azo]-5-hydroxy-

(reaction product with Na N,N-diethylmetanilate, Cr complex)

RN 859452-14-5 CAPLUS

CN 1,7-Naphthalenedisulfonic acid, 6-[2-[1-chloro-5-hydroxy-6-[2-(2-hydroxy-5-sulfophenyl)diazenyl]-7-sulfo-2-naphthalenyl]diazenyl]-2-[2-[1-[3-(4,6-dichloro-1,3,5-triazin-2-yl)-2-methyl-5-sulfophenyl]-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl]diazenyl]-5-hydroxy- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

